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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,462	06/23/2003	Daniel Wayne Bedell	HIT1P006/HSJ9-2003-0045US	2629
50535	7590	10/03/2005	EXAMINER	
ZILKA-KOTAB, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			CHEN, TIANJIE	
			ART UNIT	PAPER NUMBER
			2652	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/602,462	Applicant(s) BEDELL ET AL.	
	Examiner Tianjie Chen	Art Unit 2652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 27 July 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.  
     4a) Of the above claim(s) 1-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-37 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \* c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## ***Final Rejection***

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 25-34, 36 and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Rose et al (US 2001/0013991).

Claim 25, Rose et al shows a magnetic head in Fig. 3 as shown in next page, including: an insulating layer 70([0040] line 1); a photoresist layer 82 ([0046] line 1) positioned adjacent the insulating layer for defining at least one channel; and a coil structure 20b ([0041] line 1) defined by a conductive material situated in the channel; wherein a profile of the channel includes a first segment (se Fig. 3 shown in next page) defining a first angle and a second segment continuous with the first segment, the second segment defining a second angle being different than the first angle.

Claim 26, Rose et al further shows that the first segment of the channel is positioned below the second segment of the channel.

Claim 27, Rose et al further shows that the first segment defines a beveled angle (Fig. 3 shown in next page).

Claim 28, Rose et al further shows that the first segment defines an angle between 70 to 85 degrees.

Claim 29, Rose et al further shows that the second segment defines an angle that is substantially vertical.

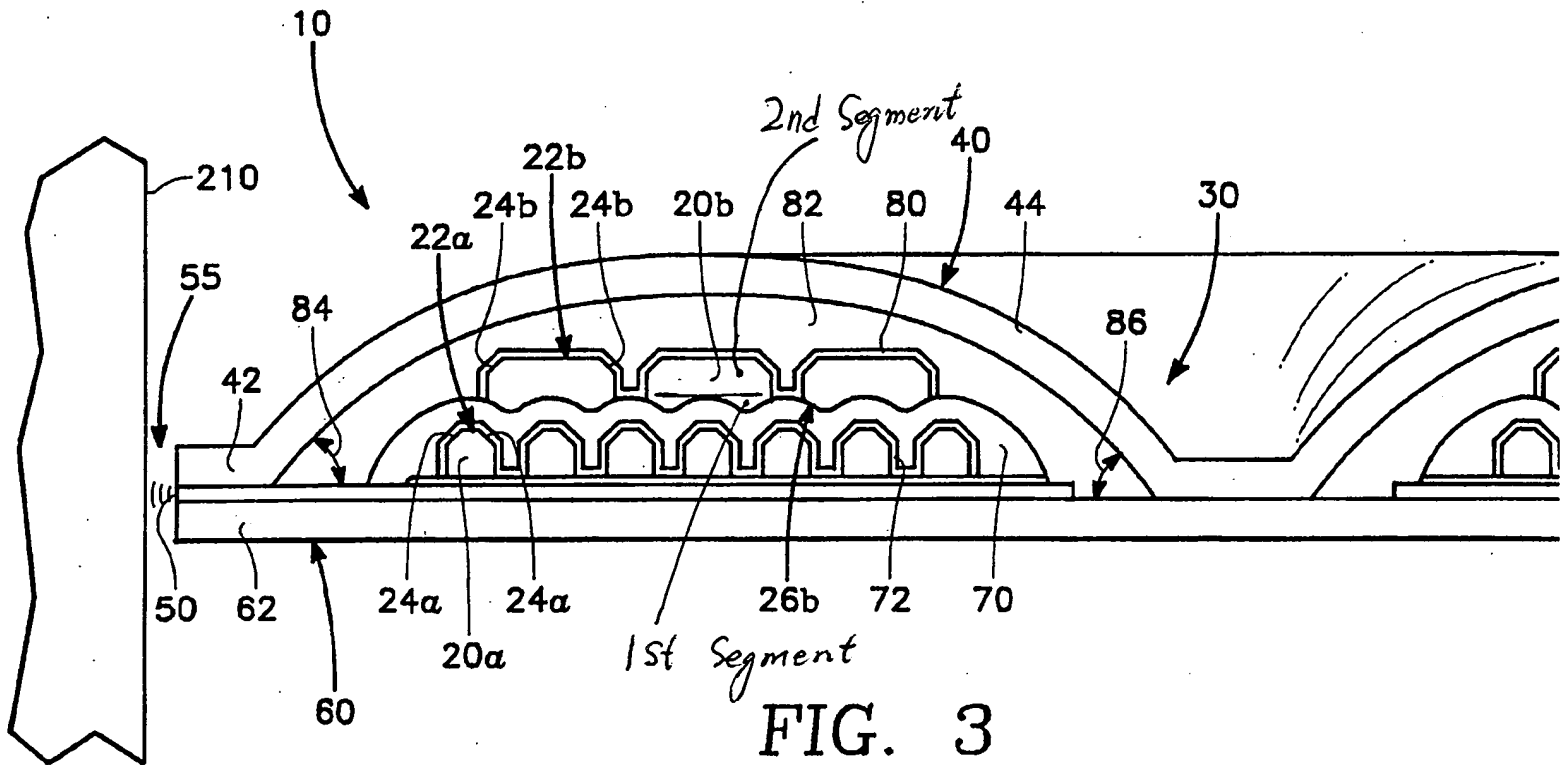


FIG. 3

Claim 30, Rose et al further shows that the second segment defines an angle between 80 to 90 degrees.

Claim 31, Rose et al further shows that the first segment defines an angle between 70-85 degrees.

Claim 32, Rose et al further shows a magnetic head.

A "product by process" claim is directed to the product per se, no matter how actually made, see *In re Hirao*, 190 USPQ 15 at 17 (footnote 3 CCPC, 5/27/76); *In re Brown*, 173 USPQ 685 (CCPA 5/18/72); *In re Luck*, 177 USPQ 523 (CCPA, 4/26/73); *In re Fessmann*, 180 USPQ 324 (CCPA, 1/10/74); *In re Thorpe*, 227 USPQ 964 (CAFC,

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11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. In claim 32, "the reactive ion etching includes  $H_2/N_2$ /  $H_2/CH_3F/C_2H_4$  reducing chemistry" is a process related limitation, which gains no weight in determining patentability.

Claim 33, Rose et al shows that the photoresist is hard-baked ([0046] lines 1).

The process related limitation gains no weight in determining patentability for the same reason described above.

Claim 34, Rose et al shows that the conductive material includes Cu ([0017]).

Claim 36, Rose shows a magnetic head.

The process related limitation gains no weight in determining patentability for the same reason described above.

Claim 37, Rose et al shows a disk drive system in Fig. 1, including: a magnetic recording disk 210; a magnetic head 220, as described above, which includes: an insulating layer, a photoresist layer positioned adjacent the insulating layer for defining one channel, and a coil structure defined by a conductive situated in the channel, wherein the channel and coil structure include a first segment defining a first angle and a second segment defining a second angle, the first and second segments being continuous; an actuator 230 for moving the magnetic head across the magnetic recording disk so the magnetic head may access different regions of the magnetic recording disk; and a controller electrically coupled to the magnetic head.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rose et al in view of Hsiao et al (US 6,570,739).

Rose et al does not show that the aspect ration of the channel and coil structure is at least 2.5.

Hsiao et al shows a magnetic head wherein that the aspect ration of the channel and coil structure is at least 2.5 (column 5, lines 37-39).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to set the aspect ration of the channel and coil structure is at least 2.5 as taught by Hsiao et al. the rationale is as follows: Hsiao et al teaches that by setting high aspect ratio for the coil, the rise time can be shortened, the data writing rate can be increased (Column 1, lines 36-45). One of ordinary skill in the art would have been motivated by Hsiao et al's teaching to set the aspect ration to increase data writing rate.

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**Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is 571-272-7570. The examiner can normally be reached on Flexible.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**TIANJIE CHEN**  
**PRIMARY EXAMINER**